

## **WHAT IS CLAIMED IS:**

1. A method for creating an improvement plan for increasing ease of vehicle disassembly comprising:

5 determining a disassembly assessment index based on disassembly assessment data using a predetermined disassembly assessment table; and

determining a design improvement plan for increasing ease of disassembly based on the determined disassembly assessment index using a predetermined disassembly improvement plan table.

10 2. The method of claim 1, wherein the disassembly assessment data structure comprises disassembly assessment data that are data for assessing ease of disassembly of structures of a vehicle, and component disassembly assessment data that are data for assessing ease of disassembly of individual components of each structure of the vehicle.

15 3. The method of claim 2, wherein the structure disassembly assessment data comprise accessibility data that has information on ease of approaching a coupling element of a corresponding structure, disassembly force transmissibility data that has information on ease of transmitting disassembling force to the coupling element of the corresponding structure, and disassembly structural attribute data that has information on the coupling element itself of the corresponding structure.

20 4. The method of claim 3, wherein the structure disassembly assessment data comprises at least one of  
approaching direction change number data that indicate a number of changes of an approaching direction to the coupling element of the corresponding structure needed,  
approaching space size data that indicate ease of approaching coupling elements of the corresponding structure,  
30 approaching route visibility data that indicate a degree of visual exposure of an approaching route to the coupling element of the corresponding structure, and  
self location data that indicate whether a guide guiding to the coupling element

of the corresponding structure exists.

5           5.       The method of claim 4, wherein the determining a disassembly assessment index determines the disassembly assessment index by endowing weights in a sequence of the approaching space size data, the approaching route visibility data, the approaching direction change number data, and the self location data.

          6.       The method of claim 3, wherein the disassembly force transmissibility data among the structure disassembly assessment data comprises at least one of visibility data that indicate a degree of visual exposure of the coupling element of the corresponding structure,

10           working space size data that indicate a size of a working space in which an operation to disassemble the coupling element of the corresponding structure is performed,

          disassembling force data that indicate an amplitude of a required disassembling force for disassembling the coupling element of the corresponding structure, and

15           holding ease data that indicate an ease of holding the coupling element of the corresponding structure.

          7.       The method of claim 6, wherein the determining a disassembly assessment index determines the disassembly assessment index by endowing weights in a sequence of the visibility data, the disassembling force data, the working space size data, and the holding ease data.

          8.       The method of claim 3, wherein the disassembly structural attribute data among the structure disassembly assessment data comprises

          pre-disjoint component number data that indicate a number of components that must be removed in order to extract the coupling element of the corresponding structure,

25           disposition state data that indicate a degree of interference of neighboring structures or components for extracting the coupling element of the corresponding structure,

          coupling element number data that indicate a number of coupling elements of the corresponding structure,

connected component number data that indicate a number of structures or individual components that are connected to the corresponding structure, and coupling point number data that data indicate a number of coupling points of the corresponding structure.

5           9.       The method of claim 8, wherein the determining a disassembly assessment index determines is the disassembly assessment index by endowing weights in a sequence of the disposition state data, the pre-disjoint component number data, the coupling point number data, the connected component number data, and the coupling element number data.

10           10.       The method of claim 2, wherein the component disassembly assessment data comprise accessibility data that has information on ease of approaching a coupling element of a corresponding component, disassembly force transmissibility data that has information on ease of transmitting disassembling force to the coupling element of the corresponding component, and disassembly structural attribute data that  
15           has information on the coupling element itself of the corresponding component.

          11.       The method claim 10, wherein the accessibility data of the component disassembly assessment data comprise at least one of

          disposition state data that indicate a degree of stability of disposition of the corresponding component,

20           approaching direction change number data that indicate a number of changes of direction of approach to the coupling element of the corresponding component,

          coupling portion exposure data that indicate a degree of interference by other components while approaching the corresponding component coupling portion, and

          state maintenance data that data indicate interference by other components and  
25           a necessity of state maintenance of the other components while approaching the coupling element of the corresponding component.

          12.       The method of claim 11, wherein the determining a disassembly assessment index determines the disassembly assessment index by endowing weights in a sequence of the coupling portion exposure data, the approaching direction change

number data, the state maintenance data, and the disposition state data among the accessibility data.

13. The method of claim 10, wherein the disassembly force transmissibility data among the component disassembly assessment data comprise at least one of

fixing state data that indicate a necessity of holding the corresponding component while disassembling the corresponding component,

working space size data that indicate a size of a working space in which an operation to disassemble the coupling element of the corresponding component is performed,

disassembling force data that indicate an amplitude of a required disassembling force for disassembling the coupling element of the corresponding component, and

holding ease data that indicate ease of holding the coupling element of the corresponding component.

14. The method of claim 13, wherein the determining a disassembly assessment index determines the disassembly assessment index by endowing weights in a sequence of the fixing state data, the disassembling force data, the working space size data, and the holding ease data.

15. The method of claim 10, wherein the disassembly structural attribute data among the structure disassembly assessment data comprise

pre-disjoint component number data that indicate a number of components that must be previously removed in order to disassemble the coupling element of the corresponding component,

disposition state data that indicate a degree of interference of neighboring structures or components for disassembling the coupling element of the corresponding component,

coupling element number data that indicate a number of coupling elements of the corresponding component,

connected component number data that indicate a number of structures or components that are connected to the corresponding component, and

coupling point number data that indicate a number of coupling points of the corresponding component.

16. The method of claim 15, wherein the determining a disassembly assessment index determines the disassembly assessment index by endowing weights in a sequence of the disposition state data, the pre-disjoint component number data, the coupling point number data, the coupling element number data, and the connected component number data.